

Radio

If You Talk Across Country, You Talk Partly by Radio

By PAUL F. GODLEY
America's Foremost Radio Authority
Countless persons have talked over a "radio" telephone without knowing it.

It's going on every day. As many as half a dozen may talk at the same time between two cities by "radio". To obviate the necessity for increased wire lines as the demands on their services increased, the American Telephone and Telegraph Co. has been using "radio" waves with great success for long-distance telephone connections.

The waves, generated by a miniature generating plant, are guided to their destination some hundreds of miles away by a pair of copper wires which may be carrying one, and perhaps two, conversations. As many as five "radio" messages may be thrown upon the wires without interference.

Wired Wireless.
This method was the first commercial, practical application of the "wired wireless," of which we have

heard so much. Its continued use should help hold down the rapidly climbing telephone rates. In the past, when increased business had overloaded existing channels, the operating companies have had to erect new lines of poles and string upon them thousands of miles of wire.

Given "wired wireless," as applied to land line telephony, it is only necessary to provide at each end a miniature generator of radio waves and a receiver suitable for "translating" those radio waves into sound waves.

With this method in use, existing circuits will be able to take care of the growth in volume of traffic for a long time.

No Loss.

Strange as it may seem, the quality and clarity of the voice as it carried across the continent in this way, is far superior to that carried by the old-type system. The three-element vacuum tube—that marvelous device used so much in radio work—is called in to act as the miniature generator of radio waves. It is also used as a detector of the waves coming from the distant place. At intervals of 400 to 600 miles are repeaters which utilize this same vacuum tube.

Prior to the invention of the vacuum tube, which is primarily a radio contribution, it was possible

to telephone only as far as Denver from New York.

The application of the vacuum tube to telephone line work makes transcontinental telephony possible. The voice of the man on the Atlantic coast now reaches his friend in San Francisco with the same distinctiveness as though they were talking across the street.

RADIO PRIMER

APERIODIC—Untuned. A circuit having no definite time period; one having no tuning condenser or tuning inductance coil.

Antony tapped the wall at the back of the shed.

"This is where the passage ought to begin."

"It needn't begin here at all, need it?" said Bill, walking round with bent head, and tapping the other walls. He was just too tall to stand upright in the shed.

"There's only one reason why it should, and that is that it would save us the trouble of looking anywhere else for it."

Antony began to feel in his pockets for his pipe and tobacco, and then suddenly stopped and stiffened to attention. For a moment he stood listening, with his head on one side, holding up a finger to bid Bill listen, too.

"What is it?" whispered Bill.

Antony waved him to silence, and remained listening. Very quietly he went down on his knees, and listened again. Then he put his ear to the floor. He got up and dusted himself quickly, walked across to Bill and whispered in his ear.

"Footsteps. Somebody coming. When I begin to talk, back me up."

Bill nodded. Antony gave him an encouraging pat on the back, and stepped firmly across to the box of bowls, whistling loudly to himself.

He took the bowls out, dropped one with a loud bang on the floor, said, "Oh, Lord!" and went on:

"I say, Bill, I don't think I want to play bowls, after all."

"Well, why did you say you did?" grumbled Bill.

Antony flashed a smile of appreciation at him.

"Well, I wanted to when I said I did, and now I don't want to."

"Then what do you want to do?" "There's a seat on the lawn. Let's go over there and bring these things along in case we want to play."

As they went across the lawn, Antony dropped the bowls and took out his pipe.

"Got a match?" he said loudly. As he bent his head over the match, he whispered, "There'll be somebody listening to us. You take the Cayley view." They walked over to the seat and sat down.

"What a heavenly night!" said Antony.

"Ripping!"

"I wonder where that poor devil Mark is now."

"It's a rum business."

"You agree with Cayley—that it was an accident?"

"Yes, You see, I know Mark."

"H'm." Antony produced a pencil and a piece of paper and began to write on his knee, but while he

wrote, he talked. He said that he thought Mark had shot his brother in a fit of anger, and that Cayley knew, or anyhow guessed, this, and had tried to give his cousin a chance of getting away.

"Mind you, I think he's right. I think it's what any of us would do. I shan't give it away, of course, but somehow there are one or two little things which make me think that Mark really did shoot his brother—I mean other than accidentally."

"Murdered him?"

"Well, manslaughtered him, anyway. I may be wrong. Anyway, it's not my business."

"But why do you think so? Because of the keys?"

"Oh, the keys are a wash-out. Still, it was a brilliant idea of mine, wasn't it?"

He had finished his writing, and now passed the paper over to Bill. In the clear moonlight the carefully printed letters could easily be read.

"Go on talking as if I were here. After a minute or two, turn round as if I were sitting on the grass behind you, but go on talking."

"I know you don't agree with me," Antony went on as Bill read, "but you'll see that I'm right."

Bill looked up and nodded eagerly. He had forgotten golf and Betty and all the other things which had made up his world lately. This was the real business.

"Well," he began deliberately, "the whole point is that I know Mark. Now, Mark—"

But Antony was off the seat and letting himself gently down into the ditch. His intention was to crawl round it until the shed came in sight. The footstep which he had heard seemed to be underneath the shed; probably there was a trap-door of some kind in the floor. Whoever it was would have heard their voices, and would probably think it worth while to listen to what they were saying.

He walked quickly but very silently along the half-length of the bowling-green to the first corner, passed cautiously round and then went down on the opposite side of the width of it to the second corner. He could hear Bill hard at it, and he smiled appreciatively to himself. Bill was a great conspirator—worth a hundred Watsons. As he approached the second corner he slowed down, and did the last few yards on hands and knees. Then, lying at full length, inch by inch his head went round the corner.

The shed was two or three yards to his left, on the opposite side of the ditch. From where he lay he could see almost entirely inside it. Everything seemed to be as they left it. The bowls-box, the lawnmower, the roller, the open croquet-box, the—

"By Jove!" said Antony to himself, "that's neat."

The lid of the other croquet-box was open, too.

Bill was turning round now; his voice became more audible; he heard go over there and bring these things along in case we want to play."

And out of the second croquet-box came Cayley's black head.

(Continued in Our Next Issue)

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The RED HOUSE MYSTERY

by A. A. MILNE
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BEGIN HERE TODAY

Who had shot and killed the ne'er-do-well ROBERT ABLETT, within two minutes after his arrival at The Red House, the country estate of his wealthy bachelor brother, MARK ABLETT? Robert's body was on the floor of the locked office, Mark had disappeared and in the eyes of Police Inspector Birch, it was clear that Mark, who had viewed Robert's return from Australia with annoyance, had shot his brother and then disappeared.

But there were mysterious circumstances. The shot was heard just a few moments before ANTHONY GILLINGHAM, gentleman, adventurer and friend of BILL DEVERLEY, one of Mark's guests, entered the hall where he found MATT CAYLEY, Mark's constant companion, pounding on the locked door and demanding admittance. The two men entered the office through a window and discovered the body.

Later, Antony vaguely suspects Cayley. Bill tells him that Mark was upset a few evenings ago when one of the guests appeared as a ghost on the bowling green. Antony and Bill discuss various theories of the murder.

GO ON WITH THE STORY.

"So, that's rather hopeless, isn't it?" Bill thought again. "Well," he said reluctantly, "suppose Mark confessed that he'd murdered his brother?"

"That's better, Bill. Don't be afraid of getting away from the accident idea. Well then, your new theory is this. Mark confesses to Cayley that he shot Robert on purpose, and Cayley decides, even at the risk of committing perjury, and getting into trouble himself, to help Mark to escape. Is that right?"

Bill nodded.

"Well then, I want to ask you two questions. First, is it possible, as I said before dinner, that any man would commit such an idiotic murder—a murder that puts the rope so very tightly round his neck? Secondly, if Cayley is prepared to perjure himself for Mark (as he has to, anyway, now) wouldn't it be simpler for him to say that he was in the office all the time, and that Robert's death was accidental?"

Bill considered this carefully, and then nodded slowly again.

"Yes, my simple explanation is a wash-out," he said. "Now let's have yours."

Antony did not answer him. He had begun to think about something quite different.

CHAPTER IX

What's the matter?" said Bill sharply.

Antony looked round at him with

raised eyebrows.

"You've thought of something suddenly," said Bill. "What is it?" Antony laughed.

"My dear Watson," he said, "you know I supposed to be as clever as this. Well, I was wondering about this ghost of yours, Bill. This is where she appeared, isn't it?"

"Yes."

"How?"

"How?" How do ghosts appear? I don't know. They just appear."

"But how did Miss Norris appear suddenly—over five hundred yards of bare park?"

Bill looked at Antony with open mouth.

"I don't know," he stammered.

"You never thought of that?"

"You would have seen her long before, wouldn't you if she had come the way we came?"

"Of course we should."

"And that would have spoilt it rather. You would have had time to recognize her walk. She couldn't have been hiding in the ditch?"

"No, she couldn't. Betty and I walked round a bit. We should have seen her."

"Then she must have been hiding in the shed. Or do you call it the summer-house?"

"We had to go there for the bowls, of course. She couldn't have been there."

"It's dashed funny," said Bill, after an interval of thought. "But it doesn't matter, does it? It has nothing to do with Robert?"

"Hasn't it?"

"Yes, has it?" said Bill, getting excited again.

"I don't know. We don't know what has, or what hasn't. But it has got something to do with Miss Norris. And Miss Norris—"

He broke off suddenly.

"What about her?"

Antony knocked out his pipe and got up slowly.

"Well then, let's find the way from the house by which Miss Norris came."

Bill jumped up eagerly.

"By Jove! Do you mean there's a secret passage?"

"A secluded passage, anyway. There must be."

"I say, what fun! I love secret passages. Good Lord, and this afternoon I was playing golf just like an ordinary merchant! What a life! Secret passages?"

They made their way down into the ditch. If an opening was to be found which led to the house, it would probably be on the house side of the green, and on the outside of the ditch. The most obvious place at which to begin the search was the shed where the bowls were kept. There were two boxes of croquet things one of them with the lid open.